

In accordance with 37 C.F.R. § 1.121(c)(1)(ii), separate sheets with the rewritten claims marked-up to show the changes made to the previous version of the claims, is filed herewith.

IN THE DRAWINGS:

Proposed drawing corrections to Figures 1, 4, 13, 37, 38, 42A, 43, 46 and 47 are filed herewith for the Examiner's approval. In accordance with 37 C.F.R. § 1.121(d), separate sheets with the proposed changes in red are filed herewith the for the Examiner's approval.

REMARKS

In view of the foregoing amendments and the following remarks, the applicants respectfully submit that the pending claims are not anticipated under 35 U.S.C. § 102 and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicants respectfully request that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.

The applicants will now address each of the issues raised in the outstanding Office Action.

## Objections

The specification is objected to as incorporating essential material by reference to a foreign application. This objection should be withdrawn because the Examiner has not shown the material at issue to be "essential material". More specifically, MPEP 608.01(p) defines "essential material" as "that which is necessary to (1) describe the claimed invention, (2) provide an enabling disclosure of the claimed invention, or (3) describe the best mode (35 U.S.C. 112)". Since the Examiner has not rejected the application under any of the provisions of 35 U.S.C. § 112, the incorporated material is, by implication, not essential. The incorporated material simply provides a basis for correcting any translation errors and is therefore largely, if not entirely, redundant to the disclosure. Accordingly, this objection should be withdrawn.

Claims 1, 4-8 and 12 are objected to because each claim contains the phrase "pick upping". These claims have been amended to recite "--picking up--". Accordingly, this objection should be withdrawn.

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Since claims 12 and 13 are believed to be allowable for the reason stated below, the applicants have not rewritten this claim in independent form at this time.

## Rejections under 35 U.S.C. § 102

Claims 6-8, 12 and 13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,434,332 ("the Kindaichi patent"). The applicants respectfully request that

the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Kindaichi is not valid prior art to the above-captioned application under 35 U.S.C. § 102(e) because the effective filing date of the above-captioned application (November 16 and/or 30, 1999) predates the U.S. filing date of the Kindaichi patent (May 3, 2000). Priority was claimed in lines 4-8 of page 1 of the specification and in the executed Declaration and Power of Attorney form filed on November 15, 2000. Certified copies of the priority documents were also filed on November 15, 2000, the receipt of which was acknowledged in item (13) of the Office Action Summary. In view of the foregoing, the claims are allowable over the Kindaichi patent.

Moreover, claim 6 is believed to be further patentable over the Kindaichi patent because it recites a processing circuit capable of generating low resolution outline data and high resolution distance measurement data, a main subject detecting means for detecting a main subject from the outline data, and distance measuring means for executing a distance measurement operation on the set distance measuring area using the high resolution distance measurement data. Accordingly, claim 6 is allowable over the Kindaichi patent for this additional reason.

#### **Rejections under 35 U.S.C. § 103**

Claims 1, 4, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,285,234 ("the Hasegawa patent") in view of U.S. Patent No. 6,088,539 ("the Aoyama patent"). The applicants respectfully request that

the Examiner reconsider and withdraw this ground of rejection in view of the following.

First, since claims 9 and 10 have been cancelled, this ground of rejection is moot with respect to these claims.

Independent claims 1 and 4, as amended, are not rendered obvious by the Hasegawa and Aoyama patents because these patents, either taken alone or in combination, neither teach, nor suggest, generating low resolution image data and high resolution image data, using the low resolution data to detect a main subject, and using the high resolution data in a distance measurement operation on the main subject. The claims, as amended, are reprinted below with this feature depicted in bold typeface:

1. (AMENDED) A distance-measuring device comprising:

two optical systems having a parallax therebetween;

an image pick up element formed on a semiconductor substrate for picking up two images formed by the optical systems;

image processing means formed on the semiconductor substrate for processing an image output from the image pick up element, **the image processing means having a low resolution mode for generation of low resolution data from an image output of the image pick up element, and a high resolution mode for generation of high resolution data from an image output of the image pick up element;**

**main subject detecting means for detecting a main subject on the basis of the low resolution data generated by the image processing means; and**

**distance-measuring means for executing a distance measurement operation, based on the high resolution data generated by the image processing means, on the main subject detected by the main subject detecting means. [Emphasis added.]**

4. (AMENDED) A camera including a distance-measuring device comprising:  
    a photographic optical system having an adjustable focus;  
    a distance-measuring optical system for dividing an image of a subject into two images;  
    an image pick up element formed on a semiconductor substrate for picking up the two images divided by the distance-measuring optical system;  
    **an image processing circuit formed on the semiconductor substrate and capable of outputting low resolution data and high resolution data by processing an image output from the image pick up element; and**  
    **a computing circuit for detecting a main subject on the basis of the low resolution data output from the image processing circuit, and outputting a focus adjusting signal to the photographic optical system, using the high resolution data output from the image processing circuit.**  
    [Emphasis added.]

In view of the foregoing, claims 1 and 4 are not rendered obvious by the Hasegawa and Aoyama patents for at least this reason.

Claims 5, 6 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,370,262 ("the Kawabata patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

First, since claim 10 has been cancelled, this ground of rejection is moot with respect to claim 10.

Independent claims 5 and 6, as amended, are not rendered obvious by the Kawabata patent because it neither teaches, nor suggests, a device including elements for generating low resolution image data and high resolution image

data, using the low resolution data to detect a main subject, and using the high resolution data in a distance measurement operation on the main subject. The claims, as amended, are reprinted below with this feature depicted in bold typeface:

5. (AMENDED) A distance-measuring device comprising:

- a distance-measuring optical system for dividing an image of a subject into two images;

- an area sensor formed on a semiconductor substrate for picking up the two images;

- a processing circuit** formed on the semiconductor substrate and capable of **generating low resolution outline data and high resolution distance measurement data on the subject on the basis of an output from the area sensor; and**

- a control circuit for detecting a main subject from the low resolution outline data output from the processing circuit, setting a distance-measuring area for the main subject, and executing distance computation using the high resolution distance measurement data in the distance-measuring area. [Emphasis added.]**

6. (AMENDED) A distance-measuring device comprising:

- a distance-measuring optical system for dividing an image of a subject into two images;

- an area sensor formed on a semiconductor substrate for picking up the two images;

- a processing circuit** formed on the semiconductor substrate and capable of **generating low resolution outline data and high resolution distance measurement data on the subject on the basis of an output from the area sensor;**

- main subject detecting means for detecting a main subject from the low resolution outline data;**

setting means for setting a distance-measuring area for the main subject; and  
**distance-measuring means for executing a distance measurement operation on the set distance-measuring area, using the high resolution distance measurement data.**  
[Emphasis added.]

In view of the foregoing, claims 5 and 6 are not rendered obvious by the Kawabata patent for at least this reason.

Claims 1-3, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,572,282 ("the Uchiyama patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

First, since claims 2, 10 and 11 have been cancelled, this ground of rejection is moot with respect to these claims.

Independent claim 1, as amended, is not rendered obvious by the Uchiyama patent because it neither teaches, nor suggests, generating low resolution image data and high resolution image data, using the low resolution data to detect a main subject, and using the high resolution data in a distance measurement operation on the main subject. Claim 1, as amended, was reprinted above with this feature depicted in bold typeface. In view of the foregoing, claim 1 is not rendered obvious by the Uchiyama patent for at least this reason. Since claim 3 depends from claim 1, it is similarly not rendered obvious.

#### Amendments to the Specification and Drawings

The specification has been amended, and changes to the drawings have been proposed, to correct a number of minor errors.

Conclusion

In view of the foregoing amendments and remarks, the applicants respectfully submit that the pending claims are in condition for allowance. Accordingly, the applicants request that the Examiner pass this application to issue.

Respectfully submitted,



John C. Pokotylo, Attorney

Reg. No. 36,242

Customer No. 26479

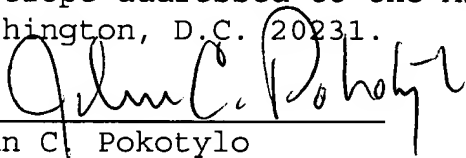
(732) 335-1222

April 21, 2003

STRAUB & POKOTYLO  
1 Bethany Road  
Suite 83  
Hazlet, NJ 07730

CERTIFICATE OF MAILING under 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being deposited on **April 21, 2003** with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.



John C. Pokotylo

Reg. No. 36,242



JCS  
APR 2 2002  
PATENT &  
FBI

SEPARATE SHEETS WITH MARKED-UP VERSION OF CHANGES TO THE  
SPECIFICATION IN ACCORDANCE WITH 37 CFR § 1.121(b)(2)(iii)

The paragraph starting at page 1, line 14 has been amended as follows:

In general, a camera incorporates a distance-measuring device for measuring a distance to a subject when [pick upping] picking up the subject so as to focus the photography lens of the camera on the subject.

The paragraph starting at page 2, line 24 has been amended as follows:

However, when the image processing device having the artificial retinal LSI disclosed in Japanese Patent Application KOKAI Publication No. 8-178637 is used in a camera, a CPU, which operates at high speed to execute complicated processing, and/or a correlation calculation unit must be mounted in the camera. These units are expensive, and the number of component parts of the distance-measuring device, and hence the size of the distance-measuring device, inevitably increase [increased] because of these units.

The paragraph starting at page 3, line 7 has been amended as follows:

Moreover, in the above distance-measuring device, two images are input using two cameras having respective artificial retinal LSIs, and the distance to a subject is measured[, i.e.]. That is, distance measurement is

executed, on the basis of the correlation of the two images using the principle of stereo. Accordingly, the device is large in size and expensive.

The paragraph starting at page 3, line 14 has been amended as follows:

This large distance-measuring device can be installed in, for example, a single lens reflex camera, but not in a small and [cheap] inexpensive machine such as a compact camera.

The paragraph starting at page 3, line 18 has been amended as follows:

In different to-be-photographed scenes, if the camera is to photograph different subjects, [must be photographed and hence the camera must be focused] it should have the ability to focus on different portions of the subjects. For example, if the main subject is a person, the camera [is focused] should focus on an upper portion, such as the face, of the person. If, on the other hand, the main subject is scenery or a building, the camera [is focused] should focus on its center.

The paragraph starting at page 3, line 26 has been amended as follows:

Usually, however, a distance-measuring point for a shortest distance to an area in which the main subject seems to exist is selected[, thereby executing] for focusing.

The paragraph starting at page 5, line 2 has been amended as follows:

Pattern detection for detecting such a distinctive point does not require such accurate detection of a distribution of reflected light as [executed for] does distance measurement. More easy detection provides a sufficient result. Therefore, if the pattern detection is executed at the same speed as distance measurement, it is a waste of time.

The paragraph starting at page 5, line 25 has been amended as follows:

According to an aspect of the invention, there is provided a distance-measuring device comprising: two optical systems having a parallax therebetween; an image pick up element formed on a semiconductor substrate for [pick upping] picking up two images formed by the optical systems; image processing means formed on the semiconductor substrate for processing an image output from the image pick up element; main subject detecting means for detecting a main subject on the basis of an output from the image processing means; and distance-measuring means for executing a distance measurement operation, based on the output of the image processing means, on the main subject detected by the main subject detecting means.

The paragraph starting at page 13, line 17 has been amended as follows:

This camera comprises: a control section 1 formed of a microcomputer for controlling components parts mentioned below and executing various operations; an AF area sensor 2 used for distance measurement; a focus lens driving section 3 for driving a focus lens 4; a focus lens encoder 5 for generating a pulse signal corresponding to the movement amount of the focus lens 4; a photometric section 7 for processing a photoelectric signal generated by a photometric photoelectric element 6, and outputting a photometry result; a shutter driving section 8 for driving a shutter (not shown); a strobe circuit section 10 for causing a strobe emission unit 9 to emit light as assisting light during photography or as AF assisting light during distance measurement; a viewfinder display section 11 for superimposing information related to the invention on a viewfinder screen including a photography screen; a camera display section 12 provided on the case of the camera and formed of, for example, an LCD, for displaying the number of film portions to be exposed, or a photography mode; a display circuit section 13 for controlling the viewfinder display section 11 and the camera display section 12; a zoom lens driving section 15 for driving a zoom lens 14 to execute zooming (changes in focal distance) and outputting focal distance data to the control section 1; a film [feeding] driving section 16 for executing auto-loading of a film, winding the film by one exposure, or rewinding the film; and a [position] camera orientation detecting section 21 for detecting the position of the camera (a landscape-size picture taking position, a portrait-size picture taking position).

The paragraph starting at page 14, line 22 has been amended as follows:

The control section 1 is connected to a first release switch (1RSW) 17 and a second release switch (2RSW) 18. The control section 1 executes distance calculation when the 1RSW 17 has been closed [turned on], and executes an exposure operation and a film winding operation when the 2RSW 18 has been closed [turned on].

The paragraph starting at page 15, line 13 has been amended as follows:

The AF area sensor 2 has a photoelectric element group 2a in which a plurality of pixel units including, for example, photodiodes, are two-dimensionally arranged in rows and columns in its photography area; a light (e.g., photo reception) signal processing circuit 2b and a fixed light eliminating section 2c. In this structure, the control section 1 controls an integration operation, thereby [pick upping] picking up a subject image formed by a distance-measuring optical system, described later, controlling a pixel amplifying circuit for each pixel so as to convert, into a voltage, a charge generated by the photoelectric element group 2a when light has entered it, and to amplify it and convert it into sensor data. The fixed light eliminating section 2c eliminates a fixed light component from the sensor data, and outputs the resultant data to the control section 1.

The paragraph starting at page 16, line 18 has been amended as follows:

Subsequently, it is determined whether or not the 1RSW 17 has been closed [turned on] (step S2). If it is determined that the 1RSW 17 is in the OFF state (if the answer at the step S2 is NO), it is determined whether or not another switch (other than the 1RSW 17 and the 2RSW 18) has been operated (step S3).

The paragraph starting at page 16, line 24 has been amended as follows:

If another switch is operated (if the answer at the step S3 is YES), processing corresponding to the operated switch is executed (for example, if a ZUSW 19 or a DSW 20 is operated, the zoom lens 14 is raised or lowered) (step S4), and the program returns to the step S2. On the other hand, if another switch is not operated (if the answer at the step S3 is NO), the program directly returns to the step [S] S2, thereby keeping the camera in a standby state.

The paragraph starting at page 17, line 6 has been amended as follows:

If it is determined at the step S2 that the 1RSW 17 has been closed [turned on] (the answer is YES), distance measurement (for auto focusing) is executed (step S5), and photometry/exposure operations are executed (step S6).

The paragraph starting at page 17, line 10 has been amended as follows:

After that, it is determined whether or not the 2RSW 18 has been closed [turned on] (step S7). If it is determined that the 2RSW 18 has been closed [turned on] (if the answer at the step S7 is YES), a shutter operation is executed to expose a portion of a film (step S8). After exposing the film portion, the film is wound by one exposure (step S9), followed by the program returning to the step S2 to thereby keep the camera in the standby state. However, if it is determined that the 2RSW 18 is not closed [turned on] (if the answer at the step S7 is NO), the program directly returns to the step S2.

The paragraph starting at page 25, line 7 has been amended as follows:

In light of this, an area used for distance measurement is limited in accordance with the focal distance data (zoom data) of a photographic optical system. The EEPROM 1e pre-stores distance-measuring area position correction data corresponding to changes in focal distance, which is read and developed in the RAM [1d] 1c when the control section 1 is initialized.

The paragraph starting at page 29, line 18 has been amended as follows:

Subsequently, a threshold level is set on the basis of a threshold level setting histogram (step S32). Various methods can be used for this setting. For example, if a mode method is used, the brightness that appears at a minimum frequency is set at the threshold level [in a case as shown in] (See FIG. 11A, for example). [thereby

executing] [binarization] Binarization processing is then performed based on the threshold level (step S33).

The paragraph starting at page 35, line 4 has been amended as follows:

FIG. 14A illustrates a photography screen for [pick upping] picking up a person. FIG. 14B illustrates outline data obtained after binarization processing, FIG. 14C low resolution data, and FIG. 14D low resolution outline data.

The paragraph starting at page 40, line 3 has been amended as follows:

To avoid the above, the AF area sensor 2 is made to execute the fixed-light-eliminating-integration processing while making the strobe unit 9 execute pre-emission several times. Since a larger amount of light is reflected from a subject when the subject is closer to the camera, an output corresponding to a subject located [remoter] further from the camera can be removed if integration control is executed on a peak amount of reflected light while executing pre-emission. As a result, outline data as shown in FIG. 18B can be obtained.

The paragraph starting at page 42, line 14 has been amended as follows:

More specifically, the AF area sensor 2 is made to execute the fixed-light-eliminating-integration processing while making the strobe unit 9 execute pre-emission several times. Since a larger amount of light is



reflected from a subject when the subject is closer to the camera, an output corresponding to a subject located [remoter] further from the camera can be removed if integration control is executed on a peak amount of reflected light while executing pre-emission. As a result, Sy projection data (Sx projection data) as shown in FIG. 20 can be obtained, thereby removing the influence of the background and realizing more accurate distance measurement with a small time lag.

The paragraph starting at page 55, line 19 has been amended as follows:

In the eighth embodiment et seq., which will be described now and later, the sensor section of the distance-measuring device is formed of a line sensor consisting of pixels (sensors) as photoelectric elements that are arranged in line, or an area sensor consisting of[\_]\_pixels (sensors) that are arranged in two-[dimensional] dimensions, for example, in a matrix. Further, any one of the line sensor and the area sensor is referred to as a sensor array.

The paragraph starting at page 59, line 18 has been amended as follows:

As shown in FIG. 32B, the distance-measuring area of 62a of a line sensor is a central slim area in the photography screen 72 of the camera. On the other hand, an area sensor is identical to a structure in which line sensors are arranged in two-[dimensional] dimensions, and accordingly the distance-measuring area can be widened to

an area 73 substantially the same as the photography screen 72.

The paragraph starting at page 59, line 26 has been amended as follows:

When [pick upping] picking up a scene as shown in FIG. 32A in the prior art, two-step exposure, a so-called focus lock operation, is executed. Specifically, at first, a main subject is contained in a distance-measuring area (a central portion of the screen), and a release button is half-pushed to execute distance measurement. After that, the camera is shifted to a position in which a to-be-photographed scene can be contained in the screen, with the release button half-pushed, thereby further pushing the release button to execute exposure.

The paragraph starting at page 60, line 9 has been amended as follows:

This operation, however, requires time and effort for a pre-operation before [pick upping] image pick up, and may lose good timing for photography in the case of [pick upping] picking up a moving subject. If an area sensor is used to widen a distance-measurement-enabled area, a distance to a main subject situated even in an end portion of the photography screen as shown in FIG. 32A can be measured.

The paragraph starting at page 60, line 22 has been amended as follows:

Where the number of distance-measuring points is extremely increased, sequential execution of distance measurement for the distance-measuring points requires [a lot of] much more time [greater] than in the case of the focus lock operation. This is very disadvantageous especially because the area sensor is more expensive than the line sensor.

The paragraph starting at page 61, line 25 has been amended as follows:

This [way of thinking] is similar to that described with reference to FIGS. 29 - 31D. If distance measurement is executed at a distance-measuring point based on the determined position as shown in FIG. 33C, an auto-focusing (AF) technique for instantly focusing the camera on a main subject is realized, irrespective of on which portion of the photography screen the main subject exists.

The paragraph starting at page 63, line 2 has been amended as follows:

The area sensors 86a and 86b are connected to a fixed-light eliminating circuit 90, where [an] a DC light signal that constantly enters the sensors through the photography screen is eliminated under the control of the computing control section 88, thereby outputting only a signal indicating pulse light (auxiliary light) from the strobe unit 84.

The paragraph starting at page 64, line 17 has been amended as follows:

As shown in FIG. 36A, each area sensor 86a or 86b is formed of line sensors arranged in rows in the photography screen. For facilitating the explanation of pattern determination, only line sensors of three rows 91a, 91b and 91c are selected. In the case of a scene as shown in FIG. 36B, [any] no portion of the person [does not exist] exists in a position corresponding to the line sensor 91a, while the face and the body of the person are situated in positions corresponding to the line sensors 91b and 91c, respectively. Accordingly, output results as shown in FIG. 36C are obtained corresponding to the respective line sensors.

The paragraph starting at page 66, line 26 has been amended as follows:

Similarly, if  $\Delta P > P_0$  at the step S200 (i.e. if the answer is YES), the program proceeds to steps [S201] S207 - [S206] S212, where it is determined in which row 91a, 91b or 91c the values x forming  $\sqcup$  are included, thereby storing the determination results in the memory of the CPU 88. For example, if the  $\sqcup$ -shape is detected at the row 91a, the x-coordinate of the leading edge of the  $\sqcup$ -shape is expressed as  $x_{191a}$ , and that of the trailing edge is expressed as  $x_{291a}$ .

The paragraph starting at page 67, line 12 has been amended as follows:

After that, it is determined whether or not the value  $y$  indicates the row 91a (step S213). If it indicates the row 91a (i.e. if the answer is YES), the value  $y$  is changed to indicate the row 91b (step S215), and the program returns to the step [S194] S192. However, if the value  $y$  does not indicate the row 91a (i.e. if the answer at the step S213 is NO), it is determined whether or not the value  $y$  indicates the row 91b (step S214). If the value  $y$  indicates the row 91b (if the answer is YES), the value  $y$  is changed to indicate the row 91c (step S216), followed by the program returning to the step S192. Thus, the  $\sqsubset$ -shaped distribution is determined.

The paragraph starting at page 68, line 11 has been amended as follows:

Similarly, it is confirmed that the x-coordinate  $x_{291b}$  or  $x_{291c}$  of a trailing edge is lower than that  $x_{191b}$  or  $x_{191c}$  of a leading edge (step S220 or S223). If the answer is NO, the width of the  $\sqsubset$ -shape is set at 0 (step S221 or S224), whereas if the answer is YES, the width  $\Delta x_{91b}$  or  $\Delta x_{91c}$  of the  $\sqsubset$ -shape is calculated as the difference between the x-coordinates of the leading and trailing edges (step [S226] S222 or [S227] S225).

The paragraph starting at page 73, line 11 has been amended as follows:

However, a lot of time is required to accurately detect each sensor output. Moreover, when detecting the position of a main subject from a wide area in the

photography screen, if each sensor is made to capture an image signal at the same high accuracy and resolution as in the case of distance measurement, great increases in the time lag [inevitably much more increases] will be inevitable. In light of this, it is necessary to more reduce the image signal processing period of each sensor when a wider area is to be scanned.

APR 28 2003

SEPARATE SHEETS WITH MARKED-UP VERSION OF CLAIMS PER 37

C.F.R. § 1.121(c)(1)(ii)

Claim 1 has been amended as follows:

1           1. (AMENDED) A distance-measuring device comprising:  
2           two optical systems having a parallax therebetween;  
3           an image pick up element formed on a semiconductor  
4           substrate for [pick upping] picking up two images formed by  
5           the optical systems;  
6           image processing means formed on the semiconductor  
7           substrate for processing an image output from the image  
8           pick up element, the image processing means having a low  
9           resolution mode for generation of low resolution data from  
10          an image output of the image pick up element, and a high  
11          resolution mode for generation of high resolution data from  
12          an image output of the image pick up element;  
13          main subject detecting means for detecting a main  
14          subject on the basis of the low resolution data generated  
15          by [an output from] the image processing means; and  
16          distance-measuring means for executing a distance  
17          measurement operation, based on the high resolution data  
18          generated by [the output of] the image processing means, on  
19          the main subject detected by the main subject detecting  
20          means.

Claim 3 has been amended as follows:

1           3. (AMENDED) The distance-measuring device according  
2           to claim 1, wherein the image processing means can  
3           individually generate the low resolution data [set an  
4           output] to the main subject detecting means and the high

5 resolution data [an output] to the distance-measuring  
6 means.

Claim 4 has been amended as follows:

1           4. (AMENDED) A camera including a distance-measuring  
2 device comprising:  
3           a photographic optical system having an adjustable  
4 focus;  
5           a distance-measuring optical system for dividing an  
6 image of a subject into two images;  
7           an image pick up element formed on a semiconductor  
8 substrate for [pick upping] picking up the two images  
9 divided by the distance-measuring optical system;  
10          an image processing circuit formed on the  
11 semiconductor substrate and capable of outputting low  
12 resolution data and high resolution data by [for]  
13 processing an image output from the image pick up element;  
14 and  
15          a computing circuit for detecting a main subject on  
16 the basis of the low resolution data [an] output from the  
17 image processing circuit, and outputting a focus adjusting  
18 signal to the photographic optical system, using the high  
19 resolution data output from the image processing circuit  
20 [on the basis of the detected main subject].

Claim 5 has been amended as follows:

1           5. (AMENDED) A distance-measuring device comprising:  
2           a distance-measuring optical system for dividing an  
3 image of a subject into two images;



4 an area sensor formed on a semiconductor substrate for  
5 [pick upping] picking up the two images;  
6 a processing circuit formed on the semiconductor  
7 substrate and capable of generating low resolution [for  
8 creating] outline data and high resolution distance  
9 measurement data on the subject on the basis of an output  
10 from the area sensor; and  
11 a control circuit for detecting a main subject from  
12 the low resolution outline data output from the processing  
13 circuit, [and] setting a distance-measuring area for the  
14 main subject, and executing distance computation using the  
15 high resolution distance measurement data in the  
16 distance-measuring area.

Claim 6 has been amended as follows:

6. (AMENDED) A distance-measuring device comprising:  
a distance-measuring optical system for dividing an  
image of a subject into two images;

an area sensor formed on a semiconductor substrate for  
[pick upping] picking up the two images;

a processing circuit formed on the semiconductor  
substrate and capable of generating low resolution [for  
creating] outline data and high resolution distance  
measurement data on the subject on the basis of an output  
from the area sensor;

main subject detecting means for detecting a main  
subject from the low resolution outline data;

setting means for setting a distance-measuring area  
for the main subject; and

distance-measuring means for executing a distance measurement operation [in] on the set distance-measuring area, using the high resolution distance measurement data.